

**REMARKS**

**Summary of the Office Action**

In the Office Action dated February 11, 2004, claims 1-3, 6-9, 11, 12, and 16-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung (US 6,512,850) in combination with Desai et al. (US 6,072,904).

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung and Desai et al., in further combination with Lim (US 6,574,368).

Claims 10 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung and Desai et al., in further combination with Hutcheson (US 5,161,204).

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung and Desai et al., in further combination with Sato et al. (JP 11-136573).

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung and Desai et al., in further combination with Craver et al. (US 6,233,367).

Claims 1, 2, 4, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Craver et al.

Claims 2, 17, and 18 stand objected to because of the informalities.

**Summary of Response to the Office Action**

Applicant has amended claims 1, 2, 5, 6, 21, and 22 to further define the invention, and has amended claims 17, and 18 in accordance with the Examiner's comments. Accordingly, claims 1-22 are presently pending.

**All Claims Define Allowable Subject Matter**

In the Office Action dated February 11, 2004, claims 1-3, 6-9, 11, 12, and 16-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung in combination with Desai et al., and claims 1, 2, 4, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Craver et al.

Applicant respectfully traverses the rejection of all claims, and respectfully requests reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims.

**The Rejection of Claims 1, 21, 22 under 35 U.S.C. § 103(a)**

In the Office Action, claims 1-3, 6-9, 11, 12, and 16-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yaung in combination with Desai et al.

Independent claim 1, as amended, recited in part an image data sorting device “wherein, extracted characteristic values are expressed in  $I_j$  dimensional vector ( $j = 1, 2, \dots, n$ , here  $1 \leq I_j$ ,  $1 \leq n$ ) in which  $n$  types of characteristic value vectors are obtained;” and “a sorting register unit that automatically sorts the plural image data pieces on the basis of a result of clustering by the clustering unit.” Similarly, independent claim 21, as amended, recites in part an image data sorting method comprising the steps of “wherein, extracted characteristic values are expressed in  $I_j$  dimensional vector ( $j = 1, 2, \dots, n$ , here  $1 \leq I_j$ ,  $1 \leq n$ ) in which  $n$  types of characteristic value vectors are obtained.” Moreover, independent claim 22, as amended, recites in part an image data sorting method comprising the steps of “extracting  $n$  types of characteristic value vectors expressed by an  $I_j$  dimensional vector ( $j = 1, 2, \dots, n$ , here  $1 \leq I_j$ ,  $1 \leq n$ ) from image data pieces.”

The Office Action alleges that Yaung discloses (col. 3, line 49, FIG. 3, item 308), an image data sorting device comprising a characteristic value extraction unit that extracts a characteristic value of an image data piece from the image data piece. However, the Office Action admits that Yaung does not expressly disclose a sorting register as claimed in the present invention. Thus, the Office Action relies upon Desai et al. for teaching a sorting register unit that sorts the plural image data pieces on the basis of a result of clustering by the clustering unit. As a result, the Office Action alleges that it would have been obvious to one of ordinary skill in art at the time the invention was made to combine the teaching of Yaung with Desai et al. to incorporate sorting register unit into image data sorting device. Applicant strongly disagrees.

In contrast to Applicant's claimed invention, Yaung teaches an image search catalog which stores one or more of four image search features (column 3, lines 47-67). In addition, Yaung teaches "similarity matrix 600" at col. 4, lines 57-61, col. 5, lines 48-61, col. 6, lines 20-24, and FIG. 6, which lists a result of a comparison between the image feature data associated with each image object and all other image objects of the set. Applicant respectfully submits that Applicant's claimed invention is adapted to extract more than four characteristic values (i.e., n types of characteristic value vectors). However, Yaung is adapted to only extracts image features limited to maximum of four image search features. (i.e., average color, histogram color, positional color, texture). Moreover, the similarity matrix disclosed by Yaung is not a vector data. Furthermore, Desai et al. does not overcome the deficiencies of Yaung.

As instructed in MPEP §2143.03, "[t]o establish a prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 4980 F.2d 981, 180 USPQ 580 (CCPA 1974)."

Accordingly, Applicant respectfully requests that the rejection of amended independent claims 1, 21, and 22 under 35 U.S.C. § 103(a) be withdrawn because Yaung and Desai et al., whether taken singly or combined fail to teach or suggest the feature of “characteristic value extraction unit that extracts n types of characteristic value vectors.”

**The Rejection of Claims 1, 21, 22 under 35 U.S.C. § 103(a)**

In the Office Action, claims 1, 2, 4, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Craver et al.

The Office Action asserts that Craver et al. discloses in one embodiment an image sorting device comprising : a characteristic value extraction unit that extracts a characteristic value of an image data piece from the image data piece; and a relation evaluation unit that evaluates a mutual relation between the characteristic values that the characteristic value extraction unit extracts from plural image data pieces. Carver also discloses in another embodiment a clustering unit that executes clustering to events expressed by the characteristic values of the plural image data pieces on the basis of an evaluation result of the relation acquired by the relation evaluation unit. Furthermore, Carver discloses in a third embodiment a sorting register unit that sorts the plural image data pieces on the basis of a result of clustering by the clustering unit. Thus, the Office action alleges that it would have been obvious to one of ordinary skill in art at the time the invention was made to combine the first embodiment and the second embodiment with the third embodiment of Craver et al. to incorporate a sorting register unit into a data sorting device. Applicant strongly disagrees.

Applicant respectfully submits that, as described in Craver et al. (column 8, lines 37-45, FIG. 3), there is no indication of “sorting register” in the disclosed invention. As taught in

column 3, lines 37-46 of SPECIFICATION (Craver et al.), FIG. 3 shows an embodiment in which a second curve (i.e., Peano curve) is employed to improve the reliability of providing images that are close together in the multi-dimensional space. However, Craver et al. is completely silent about the sorting register.

Applicant respectfully notes that MPEP 2143.01 instructs that “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention, where there is some teaching, suggestion or motivation to do so found in either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” Thus, Applicant respectfully asserts that the Office Action has not provided proper motivation for one of ordinary skill in the art to modify the teachings of “a sorting register unit” to incorporate into image data sorting device.

Accordingly, Applicant respectfully requests that the rejection of amended independent claims 1, 21, and 22 under 35 U.S.C. § 103(a) be withdrawn because Craver et al. fails to provide the motivation to combine the teaching of “a sorting register unit.”

**The Rejection of Claims 2-20 under 35 U.S.C. § 103(a)**

Applicant respectfully submits that dependent claims 2-20 are allowable for all of the reasons discussed above with regard to independent claim 1 from which they depend, as well as the individual features each of dependent claims 2-20 recite.

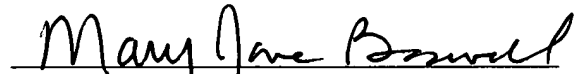
**CONCLUSION**

In view of the foregoing remarks, Applicant respectfully requests reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.R.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully Submitted,

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